SAFETY MESSAGE

Your Personal Safety is our #1 Priority

Staying on the Safe Side of Solvents

Common Solvents

Purpose of solvents

Solvents are substances that dissolve other substances. They have many applications in industry as cleansers, degreasers, and thinners.

Solvents you may have used are:

- Gasoline.
- Turpentine.
- Acetone.
- Carbon tetrachloride.
- Benzene.

Most solvents are safe to use if you handle them carefully, but have some long-term health hazards when used incorrectly.

Physical Characteristics

Know the facts

You need to know their physical characteristics to understand the dangers of solvents.

Most solvents evaporate quickly, creating breathing problems and explosion hazards.

Solvent vapors tend to ignite under certain conditions. Flammable solvents ignite at a temperature under 100°F (38.8°C) when they are exposed to a spark, flame, or static electricity.

Most solvents are heavier than air and tend to concentrate near the floor.

Questions you should answer

When reading a solvent's MSDS you should ask yourself:

- Is it flammable?
- What are its upper and lower explosive limits (these numbers indicate the range of concentrations in the air at which the solvent's vapors can explode if ignited)?
- What is the solvent's permissible exposure limit (PEL), the amount of solvent in the air you can be exposed to?

Health Hazards

Easily absorbed

Solvents tend to be easily absorbed through the lungs, skin, and eyes because of their nature.

Because they dissolve oil, they penetrate the protective oils of your skin and eyes, causing extreme irritation.

Eye splashes

Splashes in the eyes result in burning, watery eyes, redness, and irritation.

Chronic exposure to solvent vapors may cause blurred vision, a gritty feeling in the eyes, and permanent eye damage.

Health Hazards continued

Inhaling vapor

You may feel nose and throat irritation, headache, or nausea if you breath in too much solvent vapor. You may even stop breathing.

Health hazards from prolonged breathing of vapors don't give warning signals, and that makes them all the more dangerous.

Solvents can gradually damage your liver, kidneys, and nervous system when the vapors enter your bloodstream through your lungs or skin.

Solvents dissolve skin oils

Solvents dissolve the natural oils of your skin, leaving skin dry and irritated, open to infections.

Some solvents enter your bloodstream from absorption through your skin.

Long term exposure to solvents can cause contact dermatitis, a persistent skin disease with painful or itchy red skin and blisters.

Protection

Personal protective equipment

You need to be protected from their short-term and long-term effects of solvents because they can get into your body more easily than other substances.

Always wear the recommended personal protective equipment when using solvents.

This includes:

- Chemical splash goggles
- Face shield or safety glasses with side shields of rubber
- Neoprene or other gloves, using the right type of gloves for the solvent you use so the solvent won't dissolve them.

Respirators

Use the right respirator for the job you do. A respirator not designed for your solvent will not protect you at all.

Safe work practices

Be sure to use hoods, fans, and ventilation systems provided.

Avoid putting your hands in to solvents, even with gloves on. Use tools instead.

Storage and Disposal

Special storage areas	Solvents must be stored in special areas equipped with ventilation and spark-proof electrical systems because most solvents are flammable. Containers may need to be grounded to prevent sparking from static electricity. Keep solvents away from direct sunlight or other heat sources, and away from oxidizers, which increases fire hazard. Dispose of solvents and solvent-soaked rags and clothing according to company policy only.

Emergencies

Skin splashes	Wash the solvent off immediately under running water if a solvent splashes on unprotected skin.
Eye splashes	Flush eye splashes at an eyewash station for 15-20 minutes.
Breathing vapors	Get to fresh air immediately and get medical help if you or a buddy get dizzy from breathing solvent vapors.
Spills	Spilled solvent poses an explosion hazard. If a spill is to large to clean up quickly, rapidly evacuate the area and report the spill to your supervisor.
Summary	Solvents are chemical workhorses that can quickly get out of control. If you use them with caution and respect, they will continue to make your work easier.